Having thus described the invention, it is now claimed:

1.     A system for priority-based arbitration to a shared resource, accessible by a plurality of devices, the system comprising:

means for receiving a respective request signal from at least one of the plurality of devices, said respective request signal indicating that a respective device desires access to the shared resource;

means for receiving context data indicative of the state of at least one of the plurality of devices;

means for generating a respective modified request signal in response to receipt of the respective request signal, said respective modified request signal received by an arbitration means for arbitrating access to the shared resource; and

means for delaying generation of the respective modified request signal in accordance with the context data.

2.     A system according to claim 1, wherein said means for delaying includes means for counting.

3.     A system according to claim 2, wherein said means for counting is associated with a maximum count value corresponding to the context data.

4.     A system according to claim 3, wherein said means for generating the respective modified request signal generates the modified request signal in response to rollover of said means for counting.

5.      A system according to claim 1, wherein said plurality of devices include first and second devices, wherein each of said first and second devices generates context data that is received by said means for receiving context data.

6.      A system according to claim 5, wherein said first and second devices are processors, and said shared resource is a bus.

7.      A system according to claim 1, wherein said means for delaying causes a delay in generation of the modified request signal for a first delay time in accordance with context data indicative of a low priority context state.

8.      A system according to claim 1, wherein said means for delaying causes a delay in generation of the modified request signal for a second delay time in accordance with context data indicative of a high priority context state.

9.      A system according to claim 1, wherein said means for delaying causes no delay in generation of the modified request signal in accordance with context data indicative of an idle state.

10.     A system according to claim 1, wherein said system further comprises means for configuring said means for delaying to cause a predetermined delay associated with respective context data.

11.     A system for priority-based arbitration to a shared resource, accessible by a plurality of devices, the system comprising:

request assertion logic for receiving respective first request signals from at least one of said plurality of devices, and for receiving respective context data indicative

of the state of at least one of said plurality of devices, said respective first request signal indicating that the respective device desires access to the shared resource, wherein said request assertion logic generates a respective modified request signal in response to receipt of the respective first request signal, said modified request signal received by an arbitration circuit for arbitrating access to the shared resource; and

an arbitration counter for delaying generation of the respective modified request signal in accordance with the context data.

12.     A system according to claim 11, wherein said arbitration counter is associated with a maximum count value corresponding to the context data.

13.     A system according to claim 11, wherein said request assertion logic generates the respective modified request signal in response to rollover of said arbitration counter.

14.     A system according to claim 11, wherein said plurality of devices includes at least first and second processors.

15.     A system according to claim 11, wherein said shared resource is a bus.

16.     A system according to claim 11, wherein said arbitration counter delays generation of the modified request signal for a first delay time in accordance with context data indicative of a low priority context state.

17.    A system according to claim 11, wherein said arbitration counter delays generation of the modified request signal for a second delay time in accordance with context data indicative of a high priority context state.

18.    A system according to claim 11, wherein said arbitration counter provides no delay in generation of the modified request signal in accordance with context data indicative of an idle state.

19.    A system according to claim 11, wherein said system further comprises programmable configuration logic for configuring said arbitration counter to generate a predetermined delay associated with respective context data.

20.    A method for priority-based arbitration of a shared resource, accessible by a plurality of devices, the method comprising:

receiving a respective first request signal from at least one of the plurality of devices, said first request signal indicating that the respective device desires access to the shared resource;

receiving context data indicative of the state of at least one of the plurality of devices;

generating a respective modified request signal in response to receipt of the respective first request signal, said respective modified request signal received by an arbitration means for arbitrating access to the shared resource, and having a delay in accordance with the received context data.

21.    A method according to claim 20, wherein said delay is determined by a counter.

22.     A method according to claim 21, wherein said method further comprises setting the counter to count for a maximum count value corresponding to the context state.

23.     A method according to claim 22, wherein said modified request signal is generated in response to rollover of said counter.

24.     A method according to claim 20, wherein said delay has a first delay time in accordance with context data indicative of a low priority context state.

25.     A method according to claim 20, wherein said delay has a second delay time in accordance with context data indicative of a high priority context state.

26.     A method according to claim 20, wherein said delay is zero in accordance with context data indicative of an idle state.